

Remarks

With entry of the foregoing amendment, claims 1-11 remain pending in the application. New claims 14-15 have been added.

Cited Art

U.S. Pat. No. 6,351,320 B1 to Shin ("Shin"), U.S. Pat. No. 6,241,339 to Kondo ("Kondo"), and U.S. Pat. No. 6,563,945 to Holm ("Holm").

102 Rejections

Patentability of Claims 1, 3, 5-9 under 35 U.S.C. §102(e) as being anticipated by Shin

Claim 1 is directed to a method of copying onto a receiver. More specifically claim 1 recites as follows:

A method of copying a document onto a receiver, the method comprising:
determining characteristics of the receiver on which the document will be copied;
from the characteristics, determining which pigments are required to render the receiver to a given standard;
determining which pigments are required to render the document image on the receiver; and
generating copy pigment data for a print engine from the determined receiver and document pigments, the print engine employing the copy pigment data to copy the document onto the receiver.

Shin does not teach or suggest many features of claim 1, for instance, Shin's conversion of RGB color format signals to CMY color format signals based on a media type does not teach or suggest "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard." The Examiner agreed as much, when he noted the following in an Office action dated March 6, 2003:

As to claim 1, the closest prior art of Shin (US Patent No. 6,351,320 B1) and Kondo (US Patent No. 6,241,339), including the updated search, would not teach steps of "determining the characteristics of a receiver on which the document will be copied; determining which pigments are required based on the characteristics of the receiver to render the receiver to a given standard; and determining which pigments are required to render a document image on the receiver."

Thus, it is surprising that the Action now rejects previously allowed claims in light of the same reference and based on the same reasoning. The Action at page 5 states:

The indicated allowability of claims 1-11 is withdrawn in view of the newly discovered reference(s) of Holm (US Patent No. 6,563,945) to claims 4, and 10-11. Rejections based on the previous and newly cited references.

The above statement is somewhat confusing in light of the fact that the Action rejected claim 1 under 35 U.S.C. §102(e) over only the previously cited Shin reference and did not in anyway indicate that Holm by itself anticipated claim 1. Thus, the Examiner should find the arguments presented in the response to Office action filed on December 11, 2002 persuasive just as his response to these arguments in the March 6, 2003 Office action (noted above) seems to belie. In light of lack of new grounds for rejecting claim 1, Applicants respectfully reiterate the arguments presented originally in the response filed on December 11, 2002.

In the latest Action (as well as the first Office action), the office asserts that Shin teaches, “from the characteristics, determining which pigments are required to render the receiver to a given standard” and directs the applicants to the following passage:

If a media type is selected from the group of media group one, then a lookup table one for media group one 86 is accessed by the printer controller and the RGB signals are processed to generate address entries to the table 86 which stores a set of coefficients with which the Rc, Gc, and Bc, digital signals may be processed to convert them to CMY colorant signals. (Col. 8, Lines 55-57).

This does not teach or suggest “determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard.” In general, Shin is directed to methods for faithfully converting pigment representations of a document from one color format (e.g., RGB) to another color format (e.g., CMY), while minimizing the number of lookup tables (LUTs) required to accomplish the conversion. Specifically, the lookup table, referred to in the passage cited above, is used to make the adjustments necessary to convert between color formats. However, Shin fails to teach or suggest a method of “determining which pigments are required to render the receiver to a given standard” so that adjustments can be made to allow a document to be printed as if it was being printed on a standard receiver. For example, Shin does not teach or suggest a method for determining characteristics of a pink colored receiver and the adjustments in pigments (e.g., relative amounts of cyan, magenta, and yellow pigments) necessary to render the pink receiver to a standard receiver such as a receiver with a white color. However, the specification, at page 3, lines 11-14, describes determining characteristics of the receiver on which the document will be copied,” as follows:

In the case of scanner 18 (or other sensor appropriate to the information being collected), the scanning reveals the characteristics of the receiver such as its color, finish, texture, etc., that might affect the colors of a document printed thereon.

The specification, at page 4, lines 21-27, goes on then to describe “from the characteristics, determining which pigments are required to render the receiver to a given standard” as follows:

If the characteristics are other than a given standard (such as the characteristics for white paper), then the routine determines which pigments and in what amount are required to render the receiver to that standard (42). In the illustrative embodiment pigments in toners for the subtractive colors cyan, magenta, and yellow are used. The cyan pigment absorbs (removes from white light) red light, the magenta pigment absorbs green light, and the yellow pigment absorbs blue light.

However, what Shin describes is entirely different. In fact, Shin is directed to a method for faithfully translating a predetermined pigment representation of a document from one color format to another (e.g., RGB to CMY). The selection of media-type in Shin only affects the specific LUT which will be selected to convert a RGB format to a CMY format. (See e.g., Shin Col. 3, Lines 1-8) (describing how the selection of a media-type affects the selection of a LUT to be used in the RGB to CMY format conversion). This does not teach or suggest “determining characteristics of the receiver on which the document will be copied” and more particularly it does not teach or suggest “from the characteristics, determining which pigments are required to render the receiver to a given standard.” (Emphasis added). This is so because, nothing in Shin teaches or suggests determining which pigments are required to render the selected media-type to a given standard.

In fact, the methods of faithfully converting pigment representation in one color format to another, as described by Shin, can be used along with the methods claimed by the applicants to improve the process of generating highly accurate copies of original documents. The methods of Shin can be used to ensure that the accuracy of such copies is minimally affected due to any color format changes during the copying process. Whereas, the methods claimed by the applicants can ensure that the accuracy of the copies is minimally affected due to differences in the characteristics of the receivers on which they will be printed.

Because Shin fails teach or suggest at least one limitation of claim 1, claim 1 and its dependent claims 2-11 which incorporate this element clearly should be allowable over this art.

103 Rejections

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP § 2142.)

Motivations to combine or modify references must come from the references themselves or be within the body of knowledge in the art. (*See* MPEP § 2143.01.)

Patentability of Claim 2 under 35 U.S.C. §103(a) over Shin and Kondo

The Action rejects claim 2 under 35 U.S.C. §103(a) as unpatentable over Shin in view of Kondo. Applicants respectfully submit that claim 2 in its current form is allowable over the cited art. Claim 2 depends on claim 1. Claim 2 recites as follows:

The method of claim 1 wherein a characteristic of the receiver is its color.

For the reasons set forth above, Shin's conversion of RGB color format signals to CMY color format signals based on a media type does not teach or suggest "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard." Furthermore, the Kondo reference cited in the Action against claim 2 also fails to teach or suggest "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard."

Kondo, is directed to "a method of and an apparatus for correcting a print gradation" and more particularly, "to allow the user to bring the gradation (dot gain) characteristics of a given printing profile and gradation (dot gain) characteristics of desired printing conditions easily into agreement." See, Kondo Col. 2, Lines 21-30. Thus, Kondo has no need for and thus, does not teach or suggest "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard" as recited.

Neither Shin nor Kondo, individually or in combination, teach or suggest all limitations of claim 2. Thus, at least for that reason claim 2 should be patentable over the Shin and Kondo combination.

Patentability of Claims 4, 10-11 under 35 U.S.C. §103(a) over Shin and Holm

The Action rejects claim 4, 10-11 under 35 U.S.C. §103(a) as unpatentable over Shin in view of Kondo. Applicants respectfully submit that claims 4, and 10-11 in their current form are allowable over the cited art.

Claim 4

Claim 4 depends on claim 1. Claim 4 recites as follows:

The method of claim 1 wherein determining the characteristics of the receiver on which the document will be copied includes electronically scanning the receiver.

For the reasons set for the above with regard to claim 1, Shin's conversion of RGB color format signals to CMY color format signals based on a media type does not teach or suggest "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard." Furthermore, Holm does not teach or suggest "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard."

Holm is directed to addressing a completely different problem. Holm is directed to methods of processing digital photographs to apply a preferred reproduction model to an original image. (See e.g., Holm Abstract). Thus, Holm has no need for "determining characteristics of the receiver on which the document will be copied; from the characteristics, determining which pigments are required to render the receiver to a given standard." Neither Shin nor Holm, individually or in combination, teach or suggest all limitations of claim 4. Thus, at least for that reason claim 4 should be patentable over the Shin and Holm combination.

Furthermore, Holm does not teach or suggest "wherein determining the characteristics of the receiver on which the document will be copied includes electronically scanning the receiver." The Action states that while Shin does not teach or suggest determining "characteristics of a receiver on which the document will be copied include electronically

scanning the receiver. Holm teaches the receiver is scanned including the characteristic obtained.” (See, Action at page 5). The Action relies on Holm Abstract lines 3-6, which states:

Applying knowledge of the capture device physical characteristics to obtain statistics related to the scene or original captured.

However, nothing in this passage even remotely teaches or suggests “wherein determining the characteristics of the receiver on which the document will be copied includes electronically scanning the receiver.” The capture device of Holm is a device such as a camera which is used to capture an image to be reproduced later. This does not teach or suggest “determining the characteristics of the receiver on which the document will be copied includes electronically scanning the receiver.” Thus, for yet another reason, neither Shin nor Holm, individually or in combination teach or suggest all limitations of claim 4. Claim 4 in its present form should therefore be in condition for allowance. Such action is respectfully requested.

Claims 10-11

In rejecting claim 10, the Action states the following:

As to claim 10, due to similarity of this claim to those of claims 1 and 4, this claim is rejected as the reason applied to claims 1 and 4.

Applicants respectfully disagree because claim 10 recites elements not found in claims 1 or 4. For instance, claim 10 recites “from the characteristics, determining which pigments are required to render the receiver white.” (Emphasis added). To the extent the Action’s reasoning for rejecting claim 10 is the same as the reasoning for rejecting claims 1 and 4, the arguments presented above in support of the patentability of claims 1 and 4 should be equally applicable to claim 10. Thus, claim 10 and its dependent claim 11 should be in condition for allowance and such action is respectfully requested.

New claims 14 and 15

Claims 14 and 15 have been added, which are similar to the canceled claims 12-13. Claims 12-13 were rejected in an earlier Action under 35 U.S.C. § 103(a) as being unpatentable over the combination of Shin and Kobayashi et al., U.S. Pat. No. 6,434,343 B1.

Claim 14:

Claim 14 recites a system for copying a document by considering characteristics of a receiver on which the document will be printed. Specifically, Claim 14 now recites,

A copying system comprising:
a buffer storing data describing a document to be copied;
a receiver scanner scanning receivers on which a document image is to be copied and producing therefrom characteristic receiver data;
an image processor receiving the document data and receiver data, the image processor generating therefrom copy pigment data comprising pigment data required to render the receiver to a standard; and
a print engine receiving the generated copy pigment data and employing the data to copy the document onto the receiver.

Claim 14, includes “an image processor receiving the document data and receiver data, the image processor generating therefrom copy pigment data comprising pigment data required to render the receiver to a standard.” Claim 14 has been drafted to more particularly claim “an image processor” capable of using document data and data related to characteristics of a receiver to generate “copy pigment data comprising pigment data required to render the receiver to a standard” which is used by a “a print engine ... to copy the document onto the receiver.” Shin does not teach or suggest a system or method for “generating therefrom copy pigment data comprising pigment data required to render the receiver to a standard.” Neither does Kobayashi, by itself, or in combination with Shin, suggest the same. Thus, claim 14 is in condition for allowance. Claim 15 depends on claim 14 and, thus, at least for the reasons listed above with regard to claim 14, claim 15 should also be patentable.

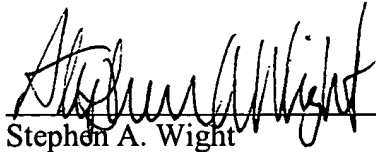
Conclusion

In light of the amendments and remarks presented above, claims 1-11 and 14-15 in their present form should be allowable. Such action is respectfully requested.

Respectfully submitted,

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